

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A multiprocessor system comprising:
two or more processor elements whose performances are to be executed by a common program;
a switching request signal detecting section for detecting a switching request signal to request switching such plural processor elements one from another;
~~a control section for switching such plural processor elements one from another said one processor element to said another processor element~~ for execution by said common program; and
a storing section, responsive to each switching of said processor elements by said control section, for storing handover information relating to the common program which information is to be handed over from said one processor element to said another processor element;
a store control section for storing said handover information from said one processor element into said storing section when said switching request signal detecting section detects the switching request signal;
a stop control section for stopping the performance of said one processor element after said store control section stores said handover information into said storing section; and
a start control section for starting the performance of said another processor element using said handover information stores in said storing section.
2. (canceled)
3. (currently amended) A multiprocessor system according to claim 1, wherein, if a performance requested to be executed for one of said plural processor elements is to be made by another processor element, said last-named one processor element outputs a said switching request signal to said control section ~~for switching said processor elements from said last-named one processor element to the last-named another processor element.~~

4. (currently amended) A multiprocessor system according to claim ~~2~~1, wherein, if a performance requested to be executed for one processor element is to be made by another processor element, the last-named one processor element outputs a switching request signal to said control section for switching said processor elements from said last-named one processor element to the last-named another processor element.

5. (original) A multiprocessor system according to claim 3, wherein said switching request signal is a switching control interruption signal.

6. (original) A multiprocessor system according to claim 4, wherein said switching request signal is a switching control interruption signal.

7. (original) A multiprocessor system according to claim 1, wherein, upon receipt of a signal from outside said system, said control section outputs an interruption signal to the last-named another processor element to stop the performance thereof.

8. (currently amended) A multiprocessor system according to claim ~~2~~1, wherein, upon receipt of a signal from outside said system, said control section outputs an interruption signal to said another processor element to stop the performance thereof.

9. (original) A multiprocessor system according to claim 3, wherein, upon receipt of a signal from outside said system, said control section outputs an interruption signal to said last-named another processor element to stop the performance thereof.

10. (original) A multiprocessor system according to claim 4, wherein, upon receipt of a signal from outside said system, said control section outputs an interruption signal to said last-named another processor element to stop the performance thereof.

11. (original) A multiprocessor system according to claim 5, wherein, upon receipt of a signal from outside said system, said control section outputs an interruption signal to said last-named processor element to stop the performance thereof.

12. (original) A multiprocessor system according to claim 6, wherein, upon receipt of a signal from, said control section outputs an interruption signal to said last-named processor element to stop the performance thereof.

13. (original) A multiprocessor system according to claim 1, wherein said control section has a table for indicating, for designation of one at a time from said plural processor elements, a permitted-to-perform processor element, which is allowed to perform processing, and controls the switching of said processor elements so as to designate said permitted-to-perform processor element based on said table.

14. (currently amended) A multiprocessor system according to claim ~~2~~1, wherein said control section has a table for indicating, for designation of one at a time among said plural processor elements, a permitted-to perform processor element, which is allowed to perform processing, and controls the switching of said processor elements so as to designate said permitted-to-perform processor element based on said table.

15. (original) A multiprocessor system according to claim 3, wherein said control section has a table for indicating, for designation of one at a time among said plural processor elements, a permitted-to-perform processor element, which is allowed to perform processing, and controls the switching of said processor elements so as to designate said permitted-to-perform processor element based on said table.

16. (original) A multiprocessor system according to claim 4, wherein said control section has a table for indicating, for designation of one at a time among said plural processor elements, a permitted-to-perform processor element, which is allowed to perform processing, and controls the switching of said processor elements so as to designate said permitted-to-perform processor element based on said table.

17. (original) A multiprocessor system according to claim 5, wherein said control section has a table for indicating, for designation of one at a time among said plural processor elements, a permitted-to-perform processor element, which is allowed to perform processing, and controls the switching of said processor elements so as to designate said permitted-to-perform processor element based on said table.

18. (original) A multiprocessor system according to claim 6, wherein said control section has a table for indicating, for designation of one at a time among said plural processor elements, a permitted-to-perform processor element, which is allowed to perform processing, and controls the switching of said processor elements so as to designate said permitted-to-perform processor element based on said table.

19. (original) A multiprocessor system according to claim 7, wherein said control section has a table for indicating, for designation of one at a time among said plural processor elements, a permitted-to-perform processor element, which is allowed to perform processing, and controls the switching of said processor elements so as to designate said permitted-to-perform processor element based on said table.

20. (original) A multiprocessor system according to claim 8, wherein said control section has a table for indicating, for designation of one at a time among said plural processor elements, a permitted-to-perform processor element, which is allowed to perform processing, and controls the switching of said processor elements so as to designate said permitted-to-perform processor element based on said table.

21. (original) A multiprocessor system according to claim 9, wherein said control section has a table for indicating, for designation of one at a time among said plural processor elements, a permitted-to-perform processor element, which is allowed to perform processing, and controls the switching of said processor elements so as to designate said permitted-to-perform processor element based on said table.

22. (original) A multiprocessor system according to claim 10, wherein said control section has a table for indicating, for designation of one at a time among said plural processor elements, a permitted-to-perform processor element, which is allowed to perform processing, and controls the switching of said processor elements so as to designate said permitted-to-perform processor element based on said table.

23. (original) A multiprocessor system according to claim 11, wherein said control section has a table for indicating, for designation of one at a time among said plural processor elements, a permitted-to-perform processor element, which is allowed to perform processing,

and controls the switching of said processor elements so as to designate said permitted-to-perform processor element based on said table.

24. (original) A multiprocessor system according to claim 12, wherein said control section has a table for indicating, for designation of one at a time among said plural processor elements, a permitted-to-perform processor element, which is allowed to perform processing, and controls the switching of said processor elements so as to designate said permitted-to-perform processor element based on said table.

25. (original) A multiprocessor system according to claim 13, wherein, with consulting said table, said control section selects said permitted-to-perform processor element, which is indicated by said table, as said another processor element, and outputs an interruption signal to said permitted-to-perform processor element to stop the performance thereof.

26. (original) A multiprocessor system according to claim 14, wherein, with consulting said table, said control section selects said permitted-to-perform processor element, which is indicated by said table, as said another processor element, and outputs an interruption signal to said permitted-to-perform processor element to stop the performance thereof.

27. (original) A multiprocessor system according to claim 15, wherein, with consulting said table, said control section selects said permitted-to-perform processor element, which is indicated by said table, as said last-named another processor element, and outputs an interruption signal to said permitted-to-perform processor element to stop the performance thereof.

28. (original) A multiprocessor system according to claim 16, wherein, with consulting said table, said control section selects said permitted-to-perform processor element, which is indicated by said table, as said last-named another processor element, and outputs an interruption signal to said permitted-to-perform processor element to stop the performance thereof.

29. (original) A multiprocessor system according to claim 17, wherein, with consulting said table, said control section selects said permitted-to-perform processor element, which is indicated by said table, as said last-named another processor element, and outputs an

interruption signal to said permitted-to-perform processor element to stop the performance thereof.

30. (original) A multiprocessor system according to claim 18, wherein, with consulting said table, said control section selects said permitted-to-perform processor element, which is indicated by said table, as said last-named another processor element, and outputs an interruption signal to said permitted-to-perform processor element to stop the performance thereof.

31. (original) A multiprocessor system according to claim 19, wherein, with consulting said table, said control section selects said permitted-to-perform processor element, which is indicated by said table, as said last-named another processor element, and outputs an interruption signal to said permitted-to-perform processor element to stop the performance thereof.

32. (original) A multiprocessor system according to claim 20, wherein, with consulting said table, said control section selects said permitted-to-perform processor element, which is indicated by said table, as said last-named another processor element, and outputs an interruption signal to said permitted-to-perform processor element to stop the performance thereof.

33. (original) A multiprocessor system according to claim 21, wherein, with consulting said table, said control section selects said permitted-to-perform processor element, which is indicated by said table, as said last-named another processor element, and outputs an interruption signal to said permitted-to-perform processor element to stop the performance thereof.

34. (original) A multiprocessor system according to claim 22, wherein, with consulting said table, said control section selects said permitted-to-perform processor element, which is indicated by said table, as said last-named another processor element, and outputs an interruption signal to said permitted-to-perform processor element to stop the performance thereof.

35. (original) A multiprocessor system according to claim 23, wherein, with consulting said table, said control section selects said permitted-to-perform processor element, which is indicated by said table, as said last-named another processor element, and outputs an interruption signal to said permitted-to-perform processor element to stop the performance thereof.

36. (original) A multiprocessor system according to claim 24, wherein, with consulting said table, said control section selects said permitted-to-perform processor element, which is indicated by said table, as said last-named another processor element, and outputs an interruption signal to said permitted-to-perform processor element to stop the performance thereof.

37. (original) A multiprocessor system according to claim 1, wherein said control section actuates one of said plural processor elements with precedence over the remaining processor elements, and actuates one of said remaining processor elements in place of the second-to-last-named one processor element as demand arises.

38. (original) A multiprocessor system according to claim 1, wherein said plural processor elements are different in function from one another.

39. (original) A multiprocessor system according to claim 38, wherein, upon receipt of a signal from outside said system, said control section selects, from said plural processor elements, one processor element to handle the last-named signal, and actuates the selected one processor element.

40. (original) A multiprocessor system according to claim 38, wherein at least one of said plural processor element is an MPU (Micro Processing Unit) and the remainder is a DSP (Digital Signal Processor), or vice versa.

41. (original) A multiprocessor system according to claim 39, wherein at least one of said plural processor element is an MPU (Micro Processing Unit) and the remainder is a DSP (Digital Signal Processor), and vice versa.

42. (original) A multiprocessor system according to claim 1, further comprising an invalidating section for invalidating the switching function of said control section to thereby actuate at least two or more of said plural processor elements simultaneously.

43. (original) A multiprocessor system according to claim 1, wherein said handover information to be stored in said storing section includes at least one selected from the group consisting of a value of a program counter, an argument of a function, a return value of a function, and content of a stack pointer.

44. (currently amended) A multiprocessor control method for switching two or more processor elements of a multiprocessor system, whose performances are to be executed by a common program, said control method comprising the steps of:

(a) detecting a switching request signal to request switching such plural processor elements, one from another;

(b) in response to each switching of said processor elements, storing handover information relating to the common program, which information is to be handed over from said one processor element to said another processor element, into a storing section of said multiprocessor system; and

~~(b)~~(c) after said handover information has been stored into the storing section, stopping the performance of said one processor element; and

(d) starting the performance of said another processor element using said handover information stored in the storing section.

45. (currently amended) A computer-readable recording medium in which a multiprocessor control program for switching two or more processor elements of a multiprocessor system, whose performances are to be executed by a common program, wherein said multiprocessor control program instructs a computer at the system to execute the steps of:

(a) detecting a switching request signal to request switching such plural processor elements one from another;

(b) in response to each switching of said processor elements, storing handover information relating to the common program, which is to be handed over from said one processor element to said another processor element into a storing section of said multiprocessor system; and

~~(b)~~(c) after said handover information has been stored into the storing section, stopping the performance of said one processor element; and

(d) stopping the performance of said another processor element using said handover information stored in said storing section.

46. (New) A multiprocessor system comprising:

a control section for switching between a first processor element and a second processor element during execution of a common program; and

a storing section, responsive to each switching of said processor elements by said control section, for storing handover information relating to the execution of the common program.